

What is claimed is:

1. An anti-proliferative composition comprising a lipid conjugated to an ω -3 fatty acid and a chemotherapeutic agent suspended in a biologically compatible buffer.

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2. The anti-proliferative composition of claim 1, wherein said ω -3 fatty acid is selected from the group consisting of docosahexanoic acid (DHA) and eicosapentaenoic acid (EPA).

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3. The anti-proliferative composition of claim 1, wherein said chemotherapeutic agent is selected from the group consisting of methotrexate, chlorambucil, and melphalan.

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4. The anti-proliferative composition of claim 1, wherein said lipid is selected from the group consisting of phosphatidylcholine and phosphatidylethanolamine.

5. The composition of claim 1 incorporated into a liposome.

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6. The composition of claim 5, wherein said lipid is phosphatidylcholine, said ω -3 fatty acid is DHA and said chemotherapeutic agent is methotrexate.

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7. The composition of claim 6, wherein said DHA is conjugated to phosphatidylcholine at the *sn*-1 position and said methotrexate is conjugated to phosphatidylcholine at the *sn*-2 position.

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8. The composition of claim 6, wherein said DHA is conjugated to phosphatidylcholine at the *sn*-2 position and said methotrexate is conjugated to phosphatidylcholine at the *sn*-1 position.

9. The composition of claim 5, wherein said lipid is phosphatidylcholine, said ω -3 fatty acid is DHA and said chemotherapeutic agent is chlorambucil.

5 10. The composition of claim 9, wherein said DHA is conjugated to phosphatidylcholine at the *sn*-1 position and said chlorambucil is conjugated to phosphatidylcholine at the *sn*-2 position.

10 11. The composition of claim 9, wherein said DHA is conjugated to phosphatidylcholine at the *sn*-2 position and said chlorambucil is conjugated to phosphatidylcholine at the *sn*-1 position.

15 12. The composition of claim 5, wherein said lipid is phosphatidylcholine, said ω -3 fatty acid is DHA and said chemotherapeutic agent is melphalan.

20 13. The composition of claim 12, wherein said DHA is conjugated to phosphatidylcholine at the *sn*-1 position and said melphalan is conjugated to phosphatidylcholine at the *sn*-2 position.

25 14. The composition of claim 12, wherein said DHA is conjugated to phosphatidylcholine at the *sn*-2 position and said melphalan is conjugated to phosphatidylcholine at the *sn*-1 position.

30 15. The composition of claim 5, wherein said lipid is phosphatidylcholine, said ω -3 fatty acid is EPA and said chemotherapeutic agent is methotrexate.

16. The composition of claim 15, wherein said EPA is conjugated to phosphatidylcholine at the *sn*-1 position and said methotrexate is conjugated to phosphatidylcholine at the *sn*-2 position.

17. The composition of claim 15, wherein said EPA is conjugated to phosphatidylcholine at the *sn*-2 position and said methotrexate is conjugated to phosphatidylcholine at the *sn*-1 position.

18. The composition of claim 5, wherein said lipid is phosphatidylcholine, said ω -3 fatty acid is EPA and said chemotherapeutic agent is chlorambucil.

19. The composition of claim 18, wherein said EPA is conjugated to phosphatidylcholine at the *sn*-1 position and said chlorambucil is conjugated to phosphatidylcholine at the *sn*-2 position.

20. The composition of claim 18, wherein said EPA is conjugated to phosphatidylcholine at the *sn*-2 position and said chlorambucil is conjugated to phosphatidylcholine at the *sn*-1 position.

21. The composition of claim 5, wherein said lipid is phosphatidylcholine, said ω -3 fatty acid is EPA and said chemotherapeutic agent is melphalan.

22. The composition of claim 21, wherein EPA is conjugated to phosphatidylcholine at the *sn*-1 position and said melphalan is conjugated to phosphatidylcholine at the *sn*-2 position.

23. The composition of claim 21, wherein said EPA is conjugated to phosphatidylcholine at the *sn*-2 position and said melphalan is conjugated to phosphatidylcholine at the *sn*-1 position.

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24. A method for inhibiting tumor cell growth, comprising administration of an effective amount of the composition of claim 1.